

Appl. No. : 10/061,438
Filed : January 31, 2002

AMENDMENTS TO THE CLAIMS

1-40. (Cancelled)

41. (Currently Amended) A method for ~~quantitating a glyceated~~ measuring glyceated and nonglyceated forms of a protein in a sample, wherein the sample contains both glyceated and nonglyceated forms of the protein, comprising:

providing a solid support having negatively charged groups immobilized thereon, which groups ~~that~~ are capable of binding both the glyceated and the nonglyceated forms of the protein at a first pH, and said support also having hydroxyboryl groups immobilized thereon, interspersed with the negatively charged groups, that which hydroxyboryl groups are capable of binding the glyceated form of the protein at a second pH;

binding both the glyceated protein and the nonglyceated protein to the negatively charged groups on the solid support at the first pH and then performing a first measurement indicative of the amount of glyceated and nonglyceated forms of the protein bound to the solid support; and

changing the pH on the support to the second pH, thereby removing to remove both the nonglyceated protein and the glyceated protein from the negatively charged groups, whereupon after which removal the glyceated protein immediately binds to the hydroxyboryl groups on the solid support ~~without an incubation period independent of incubation time~~, and then performing a second measurement indicative of the amount of the glyceated protein bound to the solid support; and
~~determining the amount or ratio of glyceated protein in the sample from the first and second measurements.~~

42. (Previously presented) The method of Claim 41, wherein the first pH is achieved by applying a buffer of about pH 5.0 to 7.0.

43. (Previously presented) The method of Claim 41, wherein the second pH is achieved by applying a buffer of about pH 8.0 to 10.0.

44. (Previously presented) The method of Claim 41, wherein the glyceated protein is hemoglobin.

45. (Previously presented) The method of Claim 41, wherein the glyceated protein is albumin.

Appl. No. : 10/061,438
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46. (Previously presented) The method of Claim 41, wherein the sample comprises blood.

47. (Previously presented) The method of Claim 41, wherein the sample comprises serum.

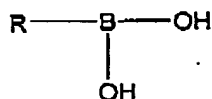
48. (Previously presented) The method of Claim 41, wherein the sample comprises plasma.

49. (Previously presented) The method of Claim 41, wherein the first and second measurements measure a physical property of the protein.

50. (Previously presented) The method of Claim 41, wherein the first and second measurements are optical readings at a predetermined wavelength.

51. (Previously presented) The method of Claim 41, wherein the first and second measurements measure a protein label.

52. (Currently Amended) The method of Claim 41, wherein the ~~dihydroxyboryl~~ hydroxyboryl group is of the type



where R is selected from the group consisting of phenyl, alkyl of 1-6 carbons, ethyl, 1-propyl, 3-methyl-1-butyl and aminophenyl.

53. (Currently Amended) The method of Claim 41, wherein the negatively charged group is selected from the group consisting of carboxylate, sulfate, sulfonate, sulfinatate and phosphate.

54. (Currently Amended) The method of Claim 41, wherein the solid support matrix is selected from the group consisting of cellulose, nitrocellulose, cellulose acetate, polyacrylamide, agarose polyacrylamide copolymer, agarose, starch, nylon, nylon polyesters, dextran, cross-linked dextran, dextran acrylamide copolymer, cross-linked hydroxyethylmethacrylate, substituted cross-linked polystyrenes, polyvinylalcohol, wool, metal oxides, porous ceramics coated with hydrophilic organic polymers and glass.

55. (New) The method of Claim 41, further comprising determining a ratio of glycated protein present in the sample to total glycated and nonglycated protein present in the sample.

Appl. No. : 10/061,438
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SUMMARY OF PERSONAL INTERVIEW

The Applicants wish to thank Examiners David Venci and Long Le for the courtesy extended to the undersigned and Mallery DeMerlier in the personal interview conducted on May 4, 2006 at the USPTO. Applicants agree with the characterization of the interview in the Interview Summary Form PTOL-413 prepared at the interview, and incorporate that summary by reference here. The following comments further summarize the interview.

During the interview, the undersigned proposed amendments to the claims that correspond in major part to those made in this response. The Section 112 and obviousness rejections were discussed. It is believed that the PTO agreed with the Applicants' position on these issues, and that no substantial obstacles remain to allowance. The substance of the interview is further incorporated into the following remarks.